

REMARKS/ARGUMENTS

I. Claim Amendments

Claim 1 is amended herein to more clearly define the scope of the claim as including "a fixture adapted to be attached with a device under test." This amendment illustrates that the fixture may be attached directly or indirectly with a device under test. In this respect, the amendment is a broadening amendment. Claim 1 is also amended to replace "having a beam" with "providing light" to more broadly include light and not limit the invention to a so-called "beam" of light. Claim 1 is also amended to specify that focusing the light onto a photosensitive target on "said device under test cause[s] latching of data into said device under test." This amendment is discussed in more detail in section II below.

Dependent claims 2-7 are amended in proper antecedent form to reflect changes to independent claim 1.

Claim 8 is amended generally to move the preamble reference to a "fixture" to the body of the claim and to conform the body of the claim to have proper antecedent basis from the change made with regard to the "fixture" limitation.

Claims 11-12 are amended to be in independent form as indicated by the Examiner would be allowable.

Claim 13 is amended to clearly indicate that the fixture is adapted to support the optical test system and that the fixture broadly houses a tube, not necessarily within "a hole." Claim 12 is also amended to more clearly indicate that the fiber is housed within the tube, and that the second lens is "aligned with" the first, and not necessarily attached to the tube. It is believed that these changes clarify the claim and, to some extent, broaden aspects of the claim.

Claim 16 is amended to replace "in contact" with "in optical communication," and replace "in contact" with "in engagement" to more broadly recite that the optical focusing elements are not necessarily in contact with the proximal surface of the substrate, and the fixture is not necessarily in contact with the focusing elements, respectively. Claim 16 is further amended to more particularly focus on the test data capturing aspects of the invention. It is believed that these changes clarify the claim and, to some extent, broaden aspects of the claim.

New dependent claim 20 is added herein to indicate that one particular device under test may be an integrated circuit.

New independent claim 21 is added herein to claim the invention somewhat similarly to other claims provided herein.

II. Rejection of claims 1-10 and 16-19 under 35 U.S.C. § 103

Claims 1-10 and 16-19 are rejected under 35 U.S.C. § 103 as being unpatentable over Rao (U.S. Pat. No. 5,812,708) and Paniccia (U.S. Pat. No. 6,052,498).

A. Claims 1-7 and 8-10

Claim 1 is an independent claim, and is amended herein, in part, as follows: "... to focus said beam of light onto a photosensitive target on said device under test ~~integrated circuit~~ to cause latching of data into said device under test." Claim 8 is also an independent claim, and the limitation as originally filed includes a similar limitation as amended claim 1. Namely, claim 8 includes "thereby to cause latching of data into said integrated circuit."

The Rao patent does not involve working with a device under test, such as in testing integrated circuits. Moreover, the Rao patent does not suggest or provide any motivation for using light directed on a photosensitive target of a device under test to cause latching of data into said device under test. Instead, the Rao patent teaches the use of laser pulses transmitted through a back side of a semiconductor to generate clock signals. See Rao patent, Abstract; see also Rao patent, col. 3, lines 28-32.

The Paniccia patent also does not involve working with a device under test, such as in testing integrated circuits. Moreover, the Paniccia patent does not suggest or provide any motivation for focusing light on to a photosensitive element of an integrated circuit to cause latching of data into said integrated circuit. Instead, as recognized by the Examiner, the Paniccia patent generally involves an optical input/output bus. See Paniccia patent, Abstract; see also Paniccia patent, col. 5, lines 38-44.

Thus, it respectfully believed that, for at least the reasons discussed above, neither the Rao patent nor the Paniccia patent, alone or in combination, disclose or suggest the inventions of claim 1 as amended herein or claim 8 as originally presented. As such, claims 1 and 8 are patentable under 35 U.S.C. § 103 over Rao and Paniccia, and in form for allowance and such indication is respectfully requested. Claims 2-7 depend from and include all of the limitations of claim 1, and claims 9-10 depend from and include all of the limitations of claim 8. Thus, for at

least the same reasons discussed above with regard to claims 1 and 8, it is believed that claims 2-7 and 9-10 are in form for allowance and such indication is respectfully requested.

B. Claims 16-19

Claim 16 is an independent claim, and is amended herein to include the limitation "whereby light is directed from said one or more optical focusing elements to said photoresistive elements to capture test data." As generally discussed above in section II(A), neither Rao or Paniccia disclose or suggest using light directed to a photoresistive element on a semiconductor to capture test data.

Thus, it respectfully believed, that neither the Rao patent nor the Paniccia patent, alone or in combination, disclose or suggest the invention of claim 16 as amended herein. As such, claim 16 is patentable under 35 U.S.C. § 103 over Rao and Paniccia, and in form for allowance and such indication is respectfully requested. Claims 17-19 depend from and include all of the limitations of claim 16. Thus, for at least the same reasons discussed above with regard to claim 16, it is believed that claims 17-19 are in form for allowance and such indication is respectfully requested.

III. Rejection of Claims 13-15 under 35 U.S.C. § 103

Claims 13-15 are rejected under 35 U.S.C. § 103 as being unpatentable over Rao (U.S. Pat. No. 5,812,708) and Paniccia (U.S. Pat. No. 6,052,498) as applied to claims 1-10 and 16-19, and further in view of Waters et al (U.S. Pat. No. 4,627,731). Claim 13 is an independent claim, and is amended herein to more clearly claim aspects of the invention discussed in the present application. Particularly, claim 13 is amended as follows: "... a fixture ~~for~~ adapted to support the optical test system of an integrated circuit under test, the fixture housing a tube; an optical fiber housed within said ~~fixture~~ tube and optically connected at its proximal end to a light source . . ."

As observed by the Examiner, Rao does not discuss how the optical fibers and lens are held in place. Claim 13, as amended, now more clearly describes a tube within a testing fixture where the tube supports a fiber. It is believed that Rao does not disclose the invention of amended claim 13. Moreover, amended claim 13 is not inherent in Rao. As discussed in MPEP § 2112, to establish inherency, the missing descriptive subject matter must be necessarily present

in the reference. It is not sufficient that the matter may be present. Assuming for the sake of argument that Rao does include some sort of fixture to hold the fiber and lens; Rao, does not discuss any particulars of such a fixture. Thus, the particular aspects of claim 13 directed toward the fixture are not necessarily present in the Rao reference.

It is further believed that neither the Paniccia reference nor the Waters reference disclose or suggest the invention of claim 13, as amended. Thus, for at least the reasons discussed herein, it is believed that claim 13 is patentable under 35 U.S.C. § 103 over Rao and Paniccia as applied to claims 1-10 and 16-19, and further in view of Waters et al. Claims 14-15 depend from and include the limitations of claim 13. Thus, for at least this reason, it is also believed that claims 14-15 are patentable under 35 U.S.C. § 103 for the same reasons as claim 13. As such, claims 13-15 are believed in form for allowance, and such indication is respectfully requested.

IV. Indication of allowable subject matter in claims 11 and 12

The Examiner is thanked for his indication that claims 11 and 12 contain allowable subject matter and would be allowable if appropriately rewritten. Accordingly, claims 11 and 12 are amended herein to be in independent form and include the limitations of the parent claims. As such, claims 11 and 12 are believed to be in form for allowance, and such indication is earnestly requested.

V. Conclusion

For at least the various reasons discussed herein, it is believed that claims 1-21 are in form for allowance, and such indication is respectfully requested.

A petition for a two month extension of time to respond to the May 8, 2003 Office action is hereby requested. A check in the amount of \$696.00 is enclosed with this Amendment to cover the \$420.00 extension of time fee and \$276.00 for the claims. It is believed no further fees are due with respect to filing of this Amendment; however, if any application processing fees are required, the Commissioner is hereby authorized to charge deposit account number 04-1415.

Application No. 09/746,618

Amt. dated Oct. 8, 2003

Reply to Office action of May 8, 2003

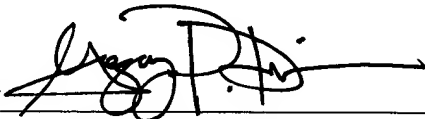
Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

DORSEY & WHITNEY LLP

Date: October 8, 2003

By

A handwritten signature in black ink, appearing to read 'Gregory P. Durbin', written over a horizontal line.

Gregory P. Durbin

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